

AMENDMENTS TO THE CLAIMS

1. – 40. (CANCELLED)

41. (NEW) A light-emitting panel comprising:

a substrate containing a plurality of cavities arranged in a pre-determined pattern, the pre-determined pattern consists of a plurality of groups of cavities, wherein the plurality of groups of cavities are uniformly spaced, one from another, within the substrate;

at least three cavities uniformly spaced one from another forming each of the plurality of groups of cavities;

a micro-component having ionizable gas therein within each of the at least three cavities, wherein each of the micro-components within each of the at least three cavities emits visible radiation at a different wavelength in response to an application of a voltage thereto.

42. (NEW) The light-emitting panel of claim 41, wherein the different wavelengths are selected from the group consisting of visible radiation in the blue, green and red spectra.

43. (NEW) A light emitting panel comprising:

a substrate containing a plurality of cavities formed therein;

at least a first, second and third micro-component arranged within each of the plurality of cavities, wherein each of the first, second and third micro-components

contains an ionizable gas, and further wherein each of the first, second, and third micro-components emits visible radiation of a different wavelength; and

at least one set of electrodes arranged within each of the plurality of cavities for selectively ionizing the gas within each of the first, second, and third microcomponents.

44. (New) The light emitting panel of claim 43, wherein the plurality of cavities are uniformly spaced apart from each other.

45. (New) The light emitting panel of claim 43, wherein the plurality of cavities are non-uniformly spaced apart from each other.

46. (New) The light-emitting panel of claim 43, wherein the different wavelengths are selected from the group consisting of visible radiation in the blue, green and red spectra.

47. (New) A method for forming an emission unit for use in a light emitting panel comprising:

forming a first conductive layer of material on a substrate;

forming a second non-conductive layer of material on the first conductive layer of material;

forming a third conductive layer of material on the second non-conductive layer of material;

forming a fourth non-conductive layer of material on the third conductive layer of material;

removing portions of the first conductive layer, the second non-conductive layer, the third conductive layer and the fourth non-conductive layer, forming a cavity therein;

forming a fifth conductive layer in the cavity;

and

inserting at least one micro-component into the cavity, wherein the micro-component is electrically contacted to the first conductive layer, the third conductive layer, and the fifth conductive layer.

48. (New) The method according to claim 47, further comprising coating the cavity with a sixth enhancement layer prior to inserting the at least one micro-component therein.

49. (New) The method according to claim 47, wherein the sixth enhancement layer is selected from the group consisting of an adhesive, a bonding agent, and a reflection filter.

50. (New) The method according to claim 48, further comprising forming a seventh transparent layer on the fourth conductive layer and the micro-component.

51. (New) The method according to claim 47, wherein the first conductive layer is a sustain electrode.

52. (New) The method according to claim 47, wherein the third conductive layer is an address electrode.

53. (New) The method according to claim 47, wherein the fifth conductive layer is a sustain electrode.

54. (New) A method for forming an emission unit for use in a light emitting panel comprising:

forming a cavity in a substrate;

forming a first mechanically flexible conductive layer of material in the cavity;

forming a second mechanically flexible non-conductive layer of material on the first mechanically flexible conductive layer of material;

forming a third mechanically flexible conductive layer of material on the second mechanically flexible non-conductive layer of material;

forming a fourth mechanically flexible non-conductive layer of material on the third mechanically flexible conductive layer of material; and

inserting at least one micro-component into the cavity by flexing the first mechanically flexible conductive layer, the second mechanically flexible non-conductive layer, the third mechanically flexible conductive layer and the fourth mechanically flexible non-conductive layer.

55. (New) The method according to claim 54, wherein the first mechanically flexible conductive layer is an address electrode.

56. (New) The method according to claim 54, wherein the third mechanically flexible conductive layer is a sustain electrode.

57. (New) The method according to claim 54, wherein a fifth enhancement material layer is applied to the micro-component and is selected from the group consisting of an anti-glare coating, a touch sensitive surface, a contrast enhancement coating and a protective coating.